Plant Science, 61 (1989) 273–276
Elsevier Scientific Publishers Ireland Ltd.

SUBJECT INDEX

Volume 61 (1989)

Abscisic acid, cytokinin, *Pinus nigra*, chlorophyll, 197
—, erucic acid, embryo development, regulation of lipid biosynthesis, 213
—, *Timmiella anomala*, gemmae, gametophores, kinetin, 203
Agrobacterium, bean, auxin, lignins, xylogenesis, 179
Agrobacterium, *Daucus carota*, transformation, callus, 253
Allantoic acid, nitrogenase activity, ureides, allantoin, 37
Allantoin, nitrogenase activity, ureides, allantoic acid, 37
Anther culture, *Solanum carolinense*, auxin, ethylene, callus, organogenesis, 131
Antiport (K^+/H^+), cytoplasmic pH, pH sensitive electrode, *Riccia fluitans*, short-term pH regulation, 9
Aquatic macrophytes, C_3-C_4 intermediate, ribulose bisphosphate carboxylase/oxygenase, phosphoenolpyruvate carboxylase, cytochemical localization, immunogold labeling, 43
Arachis hypogaea, peroxidase, purity, production, heme, 163
Asymmetric hybrid plants, gamma-irradiation, protoplast fusion, molybdenum cofactor, gene product (cnx A), 105
Auxin, *Agrobacterium*, bean, lignins, xylogenesis, 179
—, cytokinin, mRNA (chitinase β-1,3-glucanase), pathogen-related proteins, *Phytophthora parasitica* var. *nicotianae*, *Pseudomonas tabaci*, 155
—, *Solanum carolinense*, anther culture, ethylene, callus, organogenesis, 131

Barley stripe mosaic virus, polar lipids, poa semilatent virus, 53
Bean, *Agrobacterium*, auxin, lignins, xylogenesis, 179
6-Benzylaminopurine, 6-benzylaminopurine riboside, endogenous cytokinins, primary crown gall tumours, tomato, 189
6-Benzylaminopurine riboside, 6-benzylaminopurine, endogenous cytokinins, primary crown gall tumours, tomato, 189
Bostrychia, osmotic stress, turgor regulation, ionic contents, isomeric hexitols, 29
Buckwheat (*Fagopyrum esculentum* Moench.), phototropism, pulse light stimuli, 207

C_3-C_4 intermediate, aquatic macrophytes, ribulose bisphosphate carboxylase/oxygenase, phosphoenolpyruvate carboxylase, cytochemical localization, immunogold labeling, 43
Callus, *Agrobacterium*, *Daucus carota*, transformation, 253
—, *Solanum carolinense*, anther culture, auxin, ethylene, organogenesis, 131
Carbon dioxide, *Chlamydomonas*, fatty acid, lipid, 17
Cell wall extensibility, water stress, growth inhibition, tissue tension, *Phaseolus aureus*, 1
Chlamydomonas, carbon dioxide, fatty acid, lipid, 17
Chlorophenoxyacetic acid, maize, structure-activity relationship, plant growth regulator, genetic, 245
Chlorophyll, abscisic acid, cytokinin, *Pinus nigra*, 197
—, tissue culture, *Nicotiana tabacum*, suspension culture, photoassimilation, 145
—, fatty acids, *Lycopersicon esculentum*, photosynthesis, *Phytophthora capsici*, plant-pathogen interaction, 169
Chloroplast DNA, nuclear DNA, mitochondrial DNA, moss, *Physcomitrella patens*, 235
Citrus aurantium, Poorman × *Poncirus trifoliata*, plant cell cultures, flavanone-glycosylation, prunin, hesperetin-7-*O*-glucoside, narirutin, 23
Cucurbita maxima, nitrate reductase, induction, repression, 61
Cytochemical localization, aquatic macrophytes, C_3-C_4 intermediate, ribulose bisphosphate carboxylase/oxygenase, phosphoenolpyruvate carboxylase, immunogold labeling, 43
Cytokinin, abscisic acid, *Pinus nigra*, chlorophyll, 197
—, auxin, mRNA (chitinase β-1,3-glucanase), pathogen-related proteins, *Phytophthora parasitica* var. *nicotianae*, *Pseudomonas tabaci*, 155
Cytoplasmic male sterility, dsRNA, mitochondria, rice, 227
—, mitochondrial-DNA, *Nicotiana*, protoplast fusion, recombination, 137
Cytoplasmic pH, pH sensitive electrode, antiport (K^+/H^+), *Riccia fluitans*, short-term pH regulation, 9

Daucus carota, *Agrobacterium*, transformation, callus, 253
dsRNA, mitochondria, rice, cytoplasmic male sterility, 227

Eleusine coracana, finger millet, picloram, plant regeneration, somatic embryogenesis, 127
Embryo development, abscisic acid, erucic acid, regulation of lipid biosynthesis, 213
Endogenous cytokinins, 6-benzylaminopurine, 6-benzylaminopurine riboside, primary crown gall tumours, tomato, 189
Erucic acid, abscisic acid, embryo development, regulation of lipid biosynthesis, 213

Ethylene, *Solanum carolinense*, anther culture, auxin, callus, organogenesis, 131
Expression levels, gene copy number, transgenic plants, storage protein, legumin, 75

Fatty acid, carbon dioxide, *Chlamydomonas*, lipid, 17
—, chlorophylls, *Lycopersicon esculentum*, photosynthesis, *Phytophthora capsici*, plant-pathogen interaction, 169
Finger millet, *Eleusine coracana*, picloram, plant regeneration, somatic embryogenesis, 127
Flavanone-glycosylation, *Citrus aurantium*, Poorman × *Poncirus trifoliata*, plant cell cultures, prunin, hesperetin-7-*O*-glucoside, narirutin, 23

Gametophores, *Timmiella anomala*, gemmae, abscisic acid, kinetin, 203
Gamma-irradiation, protoplast fusion, asymmetric hybrid plants, molybdenum cofactor, gene product (cnx A), 105
Gemmae, *Timmiella anomala*, gametophores, abscisic acid, kinetin, 203
Genetic, maize, structure-activity relationship, plant growth regulator, chlorophenoxyacetic acid, 245
Gene copy number, expression levels, transgenic plants, storage protein, legumin, 75
Gene product (cnx A), gamma-irradiation, protoplast fusion, asymmetric hybrid plants, molybdenum cofactor, 105
Growth inhibition, water stress, cell wall extensibility, tissue tension, *Phaseolus aureus*, 1

Heat shock protein, methylation, in vitro culture, rice (*Oryza sativa* L.), 69
Heme, *Arachis hypogaea*, peroxidase, purity, production, 163
Hemicellulose, *Zea mays*, maize callus culture, potassium permanganate, 91
Hesperetin-7-*O*-glucoside, *Citrus aurantium*, Poorman × *Poncirus trifoliata*, plant cell cultures, flavanone-glycosylation, prunin, narirutin, 23

Immunogold labeling, aquatic macrophytes, C_3-C_4 intermediate, ribulose bisphosphate carboxylase/oxygenase, phosphoenolpyruvate carboxylase, cytochemical localization, 43
Induction, *Cucurbita maxima*, nitrate reductase, repression, 61
Inhibition, tissue tension, Phaseolus aureus, 1
In vitro culture, heat shock protein, methylation, rice (*Oryza sativa* L.), 69
Ionic contents, *Bostrychia*, osmotic stress, turgor regulation, isomeric hexitols, 29
Isomeric hexitols, *Bostrychia*, osmotic stress, turgor regulation, ionic contents, 29

Kinetin, *Timmiella anomala*, gemmae, gametophores, abscisic acid, 203

Legumin, gene copy number, expression levels, transgenic plants, storage protein, 75
Lignins, *Agrobacterium*, bean, auxin, xylogenesis, 179
Lipid, carbon dioxide, *Chlamydomonas*, fatty acid, 17
Lycopersicon esculentum, chlorophylls, fatty acids, photosynthesis, *Phytophthora capsici*, plant-pathogen interaction, 169

Maize, structure-activity relationship, plant growth regulator, genetic, chlorophenoxyacetic acid, 245
Maize callus culture, *Zea mays*, potassium permanganate, hemicellulose, 91
Methylation, heat shock protein, in vitro culture, rice (*Oryza sativa* L.), 69
Mitochondria, dsRNA, rice, cytoplasmic male sterility, 227
Mitochondrial DNA, *Saccharum officinarum*, 81
—, cytoplasmic male sterility, *Nicotiana*, protoplast fusion, recombination, 137
—, nuclear DNA, chloroplast DNA, moss, *Physcomitrella patens*, 235
Molybdenum cofactor, gamma-irradiation, protoplast fusion, asymmetric hybrid plants, gene product (cnx A), 105
Morphogenesis, vibratome sections, regeneration efficiency, plant growth regulators, 263
Moss, nuclear DNA, chloroplast DNA, mitochondrial DNA, *Physcomitrella patens*, 235
mRNA (chitinase β-1,3-glucanase), auxin, cytokinin, pathogen-related proteins, *Phytophthora parasitica* var. *nicotianae*, *Pseudomonas tabaci*, 155

Narirutin, *Citrus aurantium*, Poorman × *Poncirus trifoliata*, plant cell cultures, flavanone-glycosylation, prunin, hesperetin-7-*O*-glucoside, 23
Nicotiana, cytoplasmic male sterility, mitochondrial-DNA, protoplast fusion, recombination, 137
Nicotiana tabacum, tissue culture, suspension culture, chlorophyll, photoassimilation, 145
Nitrate reductase, *Cucurbita maxima*, induction, repression, 61
Nitrogenase activity, ureides, allantoin, allantoic acid, 37
Nuclear DNA, chloroplast DNA, mitochondrial DNA, moss, *Physcomitrella patens*, 235

Organellar genomes, sunflower, tRNA genes, repeats, 219
Organogenesis, *Solanum carolinense*, anther culture, auxin, ethylene, callus, 131
Osmotic stress, *Bostrychia*, turgor regulation, ionic contents, isomeric hexitols, 29

Pathogen-related proteins, auxin, cytokinin, mRNA (chitinase β-1,3-glucanase), *Phytophthora parasitica* var. *nicotianae*, *Pseudomonas tabaci*, 155
Peroxidase, *Arachis hypogaea*, purity, production, heme, 163
Phaseolus aureus, water stress, growth inhibition, cell wall extensibility, tissue tension, 1
Phosphoenolpyruvate carboxylase, aquatic macrophytes, C_3-C_4 intermediate, ribulose bisphosphate carboxylase/

oxygenase, cytochemical localization, immunogold labeling, 43
Photoassimilation, tissue culture, *Nicotiana tabacum*, suspension culture, chlorophyll, 145
Photosynthesis, chlorophylls, fatty acids, *Lycopersicon esculentum*, *Phytophthora capsici*, plant-pathogen interaction, 169
Phototropism, buckwheat (*Fagopyrum esculentum* Moench.), pulse light stimuli, 207
Physcomitrella patens, nuclear DNA, chloroplast DNA, mitochondrial DNA, moss, 235
Phytophthora capsici, chlorophylls, fatty acids, *Lycopersicon esculentum*, photosynthesis, plant-pathogen interaction, 169
Phytophthora parasitica var. *nicotianae*, auxin, cytokinin, mRNA (chitinase β-1,3-glucanase), pathogen-related proteins, *Pseudomonas tabaci*, 155
pH sensitive electrode, cytoplasmic pH, antiport (K^+/H^+), *Riccia fluitans*, short-term pH regulation, 9
Picloram, *Eleusine coracana*, finger millet, plant regeneration, somatic embryogenesis, 127
Pinus nigra, abscisic acid, cytokinin, chlorophyll, 197
Plant-pathogen interaction, chlorophylls, fatty acids, *Lycopersicon esculentum*, photosynthesis, *Phytophthora capsici*, 169
Plant cell cultures, *Citrus aurantium*, Poorman × *Poncirus trifoliata*, flavanone-glycosylation, prunin, hesperetin-7-*O*-glucoside, narirutin, 23
Plant growth regulator, maize, structure-activity relationship, genetic, chlorophenoxyacetic acid, 245
—, vibratome sections, regeneration efficiency, morphogenesis, 263
Plant regeneration, *Eleusine coracana*, finger millet, picloram, somatic embryogenesis, 127
—, *Trifolium repens*, stolon segments, somaclonal variation, white clover, 119
Poa semilatent virus, polar lipids, barley stripe mosaic virus, 53
Polar lipids, barley stripe mosaic virus, poa semilatent virus, 53
Poorman × *Poncirus trifoliata*, *Citrus aurantium*, plant cell cultures, flavanone-glycosylation, prunin, hesperetin-7-*O*-glucoside, narirutin, 23
Potassium permanganate, *Zea mays*, maize callus culture, hemicellulose, 91
Primary crown gall tumours, 6-benzylaminopurine, 6-benzylaminopurine riboside, endogenous cytokinins, tomato, 189
Production, *Arachis hypogaea*, peroxidase, purity, heme, 163
Protoplast fusion, cytoplasmic male sterility, mitochondrial-DNA, *Nicotiana*, recombination, 137
—, gamma-irradiation, asymmetric hybrid plants, molybdenum cofactor, gene product (cnx A), 105
Prunin, *Citrus aurantium*, Poorman × *Poncirus trifoliata*, plant cell cultures, flavanone-glycosylation, hesperetin-7-*O*-glucoside, narirutin, 23
Pseudomonas tabaci, auxin, cytokinin, mRNA (chitinase β-1,3-glucanase), pathogen-related proteins, *Phytophthora parasitica* var. *nicotianae*, 155
Pulse light stimuli, buckwheat (*Fagopyrum esculentum* Moench.), phototropism, 207
Purity, *Arachis hypogaea*, peroxidase, production, heme, 163

Recombination, cytoplasmic male sterility, mitochondrial-DNA, *Nicotiana*, protoplast fusion, 137
Regeneration efficiency, vibratome sections, morphogenesis, plant growth regulators, 263
Regulation of lipid biosynthesis, abscisic acid, erucic acid, embryo development, 213
Repeats, sunflower, organellar genomes, tRNA genes, 219
Repression, *Cucurbita maxima*, nitrate reductase, induction, 61
Ribulose bisphosphate carboxylase/oxygenase, aquatic macrophytes, C_3-C_4 intermediate, phosphoenolpyruvate carboxylase, cytochemical localization, immunogold labeling, 43
Riccia fluitans, cytoplasmic pH, pH sensitive electrode, antiport (K^+/H^+), short-term pH regulation, 9
Rice, dsRNA, mitochondria, cytoplasmic male sterility, 227
Rice (*Oryza sativa* L.), heat shock protein, methylation, in vitro culture, 69

Saccharum officinarum, mitochondrial DNA, 81
Short-term pH regulation, cytoplasmic pH, pH sensitive electrode, antiport (K^+/H^+), *Riccia fluitans*, 9
Solanum carolinense, anther culture, auxin, ethylene, callus, organogenesis, 131
Somaclonal variation, *Trifolium repens*, stolon segments, plant regeneration, white clover, 119
Somatic embryogenesis, *Eleusine coracana*, finger millet, picloram, plant regeneration, 127
Stolon segments, *Trifolium repens*, plant regeneration, somaclonal variation, white clover, 119
Storage protein, gene copy number, expression levels, transgenic plants, legumin, 75
Structure-activity relationship, maize, plant growth regulator, genetic, chlorophenoxyacetic acid, 245
Sunflower, organellar genomes, tRNA genes, repeats, 219
Suspension culture, tissue culture, *Nicotiana tabacum*, chlorophyll, photoassimilation, 145

Timmiella anomala, gemmae, gametophores, abscisic acid, kinetin, 203
Tissue culture, *Nicotiana tabacum*, suspension culture, chlorophyll, photoassimilation, 145
Tissue tension, water stress, growth inhibition, cell wall extensibility, *Phaseolus aureus*, 1
Tomato, 6-benzylaminopurine, 6-benzylaminopurine riboside, endogenous cytokinins, primary crown gall tumours, 189
Transformation, *Agrobacterium*, *Daucus carota*, callus, 253
Transgenic plants, gene copy number, expression levels, storage protein, legumin, 75

Trifolium repens, stolon segments, plant regeneration, somaclonal variation, white clover, 119
tRNA genes, sunflower, organellar genomes, repeats, 219
Turgor regulation, *Bostrychia*, osmotic stress, ionic contents, isomeric hexitols, 29

Ureides, nitrogenase activity, allantoin, allantoic acid, 37

Vibratome sections, regeneration efficiency, morphogenesis, plant growth regulators, 263

Water stress, growth inhibition, cell wall extensibility, tissue tension, *Phaseolus aureus*, 1
White clover, *Trifolium repens*, stolon segments, plant regeneration, somaclonal variation, 119

Xylogenesis, *Agrobacterium*, bean, auxin, lignins, 179

Zea mays, maize callus culture, potassium permanganate, hemicellulose, 91

Plant Science, 61 (1989) 277–278
Elsevier Scientific Publishers Ireland Ltd.

AUTHOR INDEX

Volume 61 (1989)

Abel, W.O. 235
Ádám, A. 53
Ahl, P. 155
Ambrosini, M. 219
Argillier, C. 37
Asahi, T. 137

Berg, R.H. 43
Berman, E. 23
Bogdanovic, M. 197
Bompeix, G. 169
Bond, J.E. 119
Boryshuk, N.V. 105
Bowes, G. 43
Bulka, K. 253

Ceci, L.R. 219
Chase, C.D. 81
Cherep, N.N. 105
Chopra, R.N. 203
Chourey, P.S. 81
Chriqui, D. 179
Close, K.R. 245
Collins, G.B. 145
Croy, R.R.D. 75

DeGruttola, D. 207
Drevon, J-J. 37
Duncan, D.R. 91

Eapen, S. 127
Ellis, R.J. 207

Famelaer, I. 105
Fei-Qin, Z. 227
Felle, H. 9
Finkelstein, R. 213
Fourré, J.L. 69
Friese, C. 235

Gallagher-Ludeman, L.A. 245
Gallerani, R. 219
George, L. 127
Gleba, Y.Y. 105
Gressel, J. 23
Grima-Pettenati, J. 179

Hackett, W.P. 263

Jacobs, M. 105
Jelić, G. 197

Kaleda, V.A. 105
Kapur, A. 203
Karsten, U. 29
Kirst, G.O. 29
Kumashiro, T. 137
Kutschera, U. 1

Laval-Martin, D. 169
Lee, S.W. 263
Lee-Stadelmann, O.Y. 263
Letham, D.S. 189
Lewinsohn, E. 23
Lhoest, J. 69
Lloyd, R.E. 81

Malfatti, P. 169
Marienfeld, J.R. 235
Martino, S.J. 61
Mazur, Y. 23
Meins, Jr., F. 155
Meng-Min, H. 227
Myers, J.R. 145

Nagy, P.D. 53
Nakakido, F. 137
Nandi, S.K. 189
Negrutiu, I. 105

Palni, L.M.S. 189
Parokonny, A.S. 105
Prinsen, E. 179

Ragland, C.K. 81
Read, P.E. 263
Reiskind, J.B. 43
Reski, R. 235
Reynolds, T.L. 131

Salsac, L. 37
Salvucci, M.E. 43
Sarni-Manchado, P. 179
Sato, N. 17
Sesto, P.A. 163
Shirsat, A.H. 75
Siculella, L. 219

Sidorov, V.A. 105
Smarrelli, Jr., J. 61
Somerville, C. 213
Soulie, M.C. 169
Summons, R.E. 189

Troton, D. 169

van Huystee, R.B. 163

Wang, W.C. 145
Webb, K.J. 119
Widholm, J.M. 91
Wilford, N. 75
Wilson, A.J. 81
Wong, O.C. 189
Wurtele, E.S. 253

Xiao-Li, G. 227

Zengbe, M. 37
Zong-Yang, W. 227